

ZEL'KO A. A.

"An Agronomic Evaluation of Ammonium and Nitrate Fertilizers on Chernozem."
Dr Agr Sci, Voronezh Agricultural Inst, Voronezh, 1953. (RZhBiol, No 7, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

ZELKO, Jaroslav, inz.

Fatigue testing of parts. Tech praca 16 no. 4:267-270
Ap '64.

CA

Corresponding states of metals. M. A. Zalkin, *Zhar.* *Viss. Publ.* 18, 847-66 (1939).—The attempt of Ludwik (C.A. 32, 3232) to arrive at a common law for the temp. dependence of mech. properties of metals and alloys by using, in the spirit of the theorem of corresponding states, a reduced abs. temp. T/T_f (where T_f = temp. of fusion) has failed to place exptl. points for different metals on a single curve. The root of this failure is seen in discontinuous changes of the properties in allotropic phase transitions. The theorem of corresponding states can be successfully extended to mech. properties of metals if it is confined to definite modifications. The temp. dependence of a mech. property σ is given by $\sigma = \sigma_0 e^{-\lambda T}$, with the temp. coeff. $\alpha = (\ln \sigma_1 - \ln \sigma_f)/(T_f - T_i)$, where the subscripts i = initial, f = final. The reduced temp., r is defined by $r = (T - T_i)/(T_f - T_i)$, and a "reduced" σ by $\delta = (\sigma - \sigma_i)/(\sigma_1 - \sigma_f)$, and $(\log \sigma - \log \sigma_i)/(\log \sigma_1 - \log \sigma_f) = \lambda$. Hence, $\lambda + r = 1$, or $\sigma/\sigma_i = (\delta/\delta_i)^r$, which expressions are common to all metals within the limits of sep. allotropic modifications and definite temp. ranges. For practical tests, these equations are put into the form $\log \sigma = \log \sigma_i - \log (\sigma_i/\sigma_1)r$, or $\log \sigma = r \log \sigma_i + \lambda \log \sigma_i$. These relations are verified against the data of L. (loc. cit.) for the tensile strength of Sn, Pb, Zn, and Mg, and against new exptl. data of the tensile strength on steels (both α and γ) with from 0.12 to 1.10% C, between -200 and +1300°, the exptl. ($\lambda + r = 1$) coincides satisfactorily with the theoretical relation. Similar agreement was found for one steel at different rates of deformation, from 0.013 to 50 mm./sec., and in other instances. For Cu, the corresponding-states relation was confirmed, between -193 and +1000°, and rates of deformation from 0.01 to 20 mm./sec., for several mech. properties, tensile strength, yield point, etc. The point of recrystn. manifests itself by a distinct break, and should therefore be treated as a point of allotropic transition. Elasticity modulus, Brinell hardness, etc., also fit this scheme.
N. Thom

ZELKOV, R. L.

N/5
662.316
.D2

Konveyery so stal'noy lentoj; osnovy proektirovaniya,
rascheta i ekspluatatsii (Steel Belt Conveyors; Principles of
Planning, Calculation and Operation, by) V. K. Dbyakov, R. L. Zelkov.
Moskva, Mashgiz, 1952.

161 p. diagrs., tables.

ZEL'KOVICH, Abram Iosifovich; KHOHRYAKOV, Pavel Aleksandrovich;
KILEYMOVA, E.P., vedushchiy red.; FEDOTOVA, I.G., tekhn.red.

[Ways to lower the construction cost of petroleum refineries]
Puti snizheniya stoimosti sooruzheniya neftepererabatyvayushchikh zavodov. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 105 p.
(Petroleum refineries) (MIRA 12:?)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

ZELKOVSKIY, D. S.

"Instrument for Measuring Load in Low Voltage Circuits," Prom. Energet., No. 10,
1949. Mbr., Buysk Municipal Electrosta., -cl949-.

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

SOBOTKOWSKI, Witold, mgr inz.; ZELKOWSKI, Jacek, mgr inz.

Power station needs as a factor shaping the over all heat
consumption in modern power plants. Pt. 2. Energetyka Pol
16 no.12:358-361 D '62.

SZCZOTKOWSKI, Witold, mgr inż.; ZELKOWSKI, Jacek, mgr inż.

Needs of the power-producing plant itself as a factor shaping the consumption of thermal power per unit in modern electric power plants. Pt. 1. Energetyka Pol 16 no.11:329-331 N '62.

ZELKOWSKI, Jacek, mgr inz.

Furnace pressure in pulverized fuel boilers and its effect
on the output and compression of forced and induced draught
fans. Energetyka Pol 16 no.9:Suppl.: Energopomiar 8
no.5:40 S '62.

1. Dzial Kotlow i Spalania, Zaklad Padan i Pomiarow,
Warszawa.

MOSKAL, Stanislaw, mgr inz.; ZELKOWSKI, Jacek, mgr inz.

Some deficiencies of the La Mont boiler and their removal by reconstructing the furnace chamber. Energetyka Pol. 15 no.9; Suppl.: Energopomiar 7 no.2:12-16 S '61.

1. Dzial Kotlow i Spalania, Zaklad Badan i Pomiarow, Warszawa.

ZELL', A.A.

Forest Nurseries

Mechanical means of digging up stock for transplanting.

Les khoz. 5 no. 9, 1952

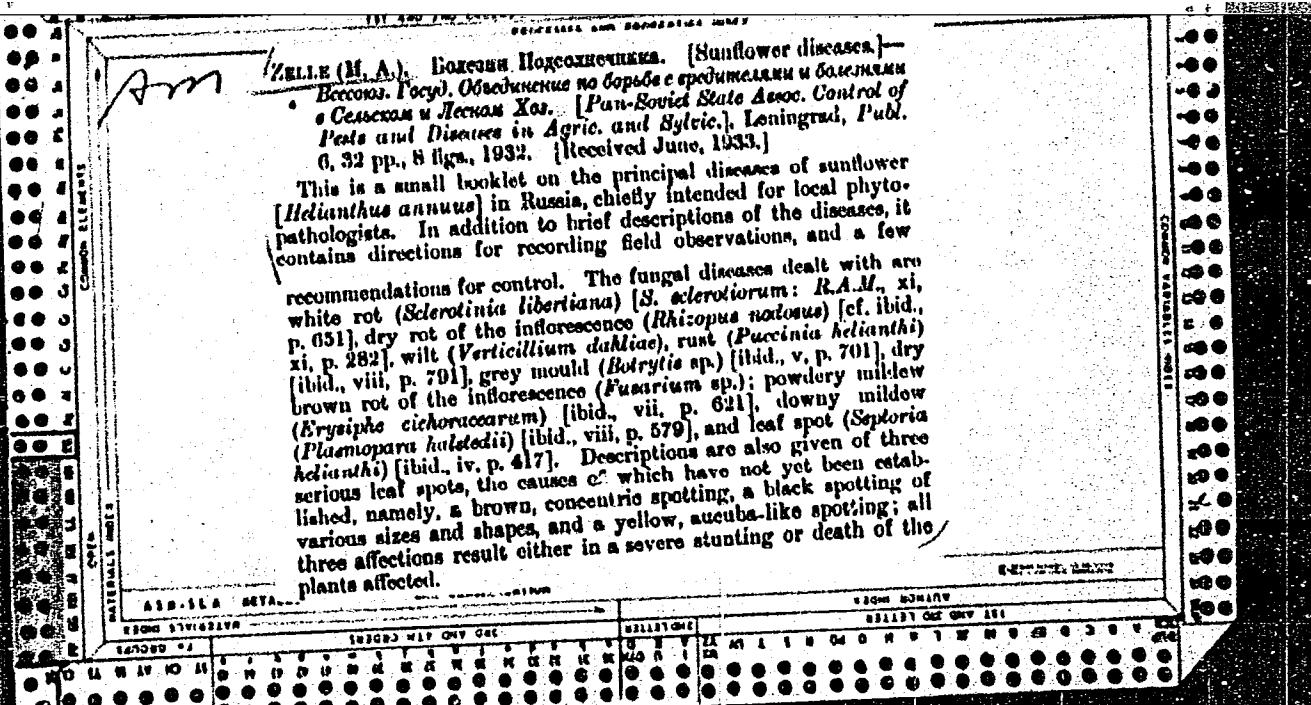
9. Monthly List of Russian Accessions, Library of Congress, November 1952 ~~XXXXX~~ 1953, Uncl.

ZELL!, A.A.

Plows

Mechanical means of digging up stock for transplanting. Les. khoz. 5. no. 9, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. Unclassified.



ZELLE, Anna; FIJALKOWSKI, Jerzy

Spectrographic determination of impurities in target gold. Chem anal 7 no.2:
317-322 '62

1. Zaklad Technologii Izotopow, Instytut Badan Jadrowych, Polska Akademia Nauk, Warszawa.

FIJALKOWSKI, Jerzy; ZELLE, Anna.

Spectrographic determination of halogens in solutions with the copper spark method. Chem anal 6 no.3:323-330 '61.

1. Department of Technology of Radioisotopes, Institute of Nuclear Research, Polish Academy of Sciences, Warsaw.

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

ZELLER, Lidia (Budapest, XIV., Vajdahunyad var); TOTH, Sandor (Budapest,
XIV., Vajdahunyad var)

Microscopic fungi from the Bukk Mountains. Botan kozl 48
no.3/4:228-231 '60.

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

ZELLER, Lidia (Budapest VIII., Muzeum korut 4/a); TOTH, Sander (Budapest XIV., Vajdahunyad var)

Microscopic fungi in the Bükk Mountains. II. Botan kozl 49 no.
1/2:103-109 '61.

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

ZELLER, Werner; ERDELI, I. [translator]; ALEKSEYEV, S.P., red.

[Technique of noise control] Tekhnika bor'by s shumom. Moskva,
Gos.izd-vo lit-ry po stroit. arkhit. i stroit. materialam,
1958. 427 p. Translated from French. (MIRA 16:2)
(Noise control)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

GORYUNOV, P.I., inzh.; ZELLER, Yu.G., inzh.

Adjustment of a remotely controlled PZ-158 type protection
system. Elek.sta. 32 no.9:87-89 S '61. (MIRA 14:10)
(Remote control)
(Electric protection)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

VOLYNSKIY, S.L., inzh.; GORYUNOV, P.I., inzh.; ZELLER, Yu.G., inzh.;
Kheyfets, S.I., inzh.

Redesigning the N-11 automatic oscilloscope. Elek.sta. 29
no.11:85-86 N '58. (MIRA 11:12)
(Oscilloscope)

POSCH, Elek; BUDAvari, Istvan, ZELLES, Tidavar

Glycoprotein metabolism in ileus. Magy. sebesz. 17 no.1:
12-18 F'64.

1. Budapesti Orvostudomanyi Egyetem Korelettani Intezete.

*

SZOKÉ, Agnes, dr.; ZELLES, Tivadar, dr.

Studies on the resting position of the mandible. Fogorv. szemle
59 no.1:19-22 Ja '66.

1. A Budapesti Orvostudományi Egyetem Fogpotlastani Klinikájának
(igazgató: Molnár, László, dr. egyetemi tanár) és Korelettani
Intézetének (igazgató: Sas József, dr. egyetemi tanár) közleménye.

L 14892-66

ACC NR: AT6007404

SOURCE CODE: HU/2505/65/026/00X/0025/0026

AUTHOR: Zelles, T.; Gati, T.; Budavari, I.; Gyenge, K.

20
B+1

ORG: Institute of Pathophysiology, Medical University of Budapest (Budapesti Orvostudomanyi Egyetem, Korelettani Intezet)

TITLE: Humoral regulation of saliva secretion in the rat [This paper was presented at the 29th Meeting of the Hungarian Physiological Society held in Szeged from 2 to 4 July, 1964]

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, Supplement, 1965, 25-26

TOPIC TAGS: rat, drug effect, biologic secretion, digestive system, digestion, animal physiology

ABSTRACT: The conditioned and unconditioned reflex control of salivation is well known. BEZNAK was the first to show that salivation increases in response to humoral effects. No data are avail-

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L 14892-66

ACC NR: AT6007404

occisa upon entry of the food into the duodenum. Of these, gastric secretion is markedly reduced by enterogastrone. It has been shown that olive oil administered into the duodenum, suppresses the pilocarpine-induced salivation strongly while it has no influence on the sialic acid, Na and K concentration of the saliva. It may be surmised that the duodenal parahormones activated by the oil are responsible for the effect. [JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 2/2

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, Supplement, 1945, 40.

TOPIC TAGS: vitamin, blood pressure, cardiovascular system, rat, magnesium, animal physiology

ABSTRACT: Early studies indicated that Mg^{++} exerted a protective effect in experimental hypertension. The changes in the collagen crosslinks which arise in the vessels in response to the hypervitaminosis and to a diet high in vitamin D have been studied by VENZAR's method. The tension resulting from thermic contraction was similar

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ACU NR: AT0007429

in the control group and in the group fed a diet high in vitamin D₂ + MgCl₂, and was elevated in the group on a diet rich in vitamin D₂ alone. In the second group, the Ca content of the aorta and the changes in the vascular wall thickness/lumen ratio in the coronary branches were studied. The Ca content of the aorta of animals on the cardiopathogenic diet was twice as high as that of the controls or of the animals on the cardiopathogenic diet but rich in Mg, the last two groups having similar values. The vascular wall/lumen ratios were 2.5 in the controls, 5.2 in the group on the cardiopathogenic diet, and 2.1 in the group on the same diet with added Mg. The experimental vascular changes caused by diet of hypervitaminosis D₂ can be prevented by feeding a diet rich in Mg. [JPRS]

SUB CODE: 06 / SUBM DATE: none

POSGH, Elek, dr.; ZELLES, Tivador, dr.; BUDAVERI, Istvan, dr.

Behavior of serum proteins in intestinal obstruction. Orv.
hetil. 105 no.11:488-490 15 Mr'64.

1. Budapesti Orvostudomanyi Egyetem, Korelettani Intezet.

POSCH, E.; BUDAVERI, I.; ZELLES, T.; BARTOS, E., Technische Assistent;
KIRALY, O. (Frau), Technische Assistent

Concerning glycoprotein metabolism in ileus. Acta Chir. Acad.
Sci. Hung. 5 no.1:63-70 '64.

1. Pathophysiologisches Institut (Direktor: Prof. Dr. J. Sos)
der Medizinischen Universitat, Budapest.

TOPIC TAGS: cardiovascular system, rat, protein, gamma globulin

ABSTRACT:

The effect of muscle activity on the factors involved in the pathogenicity of the cardiopathogenic diet S-65 has been studied. Rats kept on the cardiopathogenic diet and forced to swim daily had significantly lower blood cholesterol levels than the rats which were kept on the diet without exercise. Comparable values were obtained from the control animals and those which were forced to swim. It

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L-15481-56
ACC NR: AT6007428

is known from the literature that the blood lipid level is lowered by chronic exercise as well and

SUB CODE: 06 / SUBM DATE: none

213

ZELLIS, J. (g. Riga)

Seminar for volunteer instructors. Sov.profsciuz 4 no.6:64-65
Je '56. (MLRA 9:8)

1. Sekretar' Latviyskogo respublikanskogo komiteta profsoyuza
rabochikh i sluzhashchikh sel'skogo khozyaystva i zagotovok.
(Riga--Trade unions)

CA
7

Identification of aldehydes as carboxyphenylhydrazones. II. Zellner (Bad Ischl, Austria). Monatsh. **80**, 330-2 (1972). Derivs. of aldehydes and ketones with α -hydroxybenzoic acid (I) are nicely cryst. and the racemic forms can be isolated as alkaloid salts. The hydrazones can be titrated to confirm accurate compn. They are prep'd. by reaction of the aldehyde or ketone with an aq. soln. of I (HCl salt) previously neutralized with 1.5 equiv. of NaOAc. The cryst. derivs. are recryst'd. from aq. EtOH. The following α -carboxyphenylhydrazones were prep'd.: (uncorrected m.p. in parentheses) isobutyraldehyde (151-2°), butyraldehyde (137-8°), propionaldehyde (123-9.6°), glyceraldehyde (could not be recryst'd.), acetone (yellow needles 171-2.6°). The parent aldehyde can be regenerated by heating the hydrazone with a large excess of LiAl.

Walton J. Smith

*C.A.**10*

A new preparation of lactic aldehyde in inactive and optically active forms. R. Dworzak and H. Zellner, Monatsh., 80, 401-19 (1949).—Model expts. with glycine to prep. Schiff bases of AcH iso-PCHO (I), PCHO, and glyceraldehyde with *o*-H₂NCH₂CO₂H yielded unsatisfactory products, even though it was shown that the aldehyde could be regenerated by boiling the Schiff base with HgCl₂. I and 3, and 4-H₂NCH₂CO₂H yielded similar products. The 2-carboxyphenylhydrazones also were not satisfactory. Preliminary attempts to reduce racemic MeCH(OAc)COCl (II) by the Rosenmund reduction method showed that unhyd. conditions at temps. of boiling xylene for 24 hrs. with Pd catalysts were important. Optically active lactic acid, purified by vacuum distn., $[\alpha]_D^{25} -3.82^\circ$, II, by 56-7%, $[\alpha]_D^{25} -29.5^\circ$. A typical prepn. was the reduction of 23.3 g. II in 60 cc. xylene heated 3 times with 0.25 g. Pd-asbestos cat., rest in the presence of H for 28 hrs. The theoretical amt. of HCl was split off, and the acetyl group was reduced to AcOH. Lactaldehyde, $[\alpha]_D^{25} -2.65^\circ$. Walton J. Smith

ZELLNER, P.

MATE, K.;PREKOP, D.;ZELLNER, P.

Cortisone treatment of rheumatoid arthritis and a perusal of the present status of the ACTH and cortisone problem. Orv. hetil.
93 no. 11:338-343 16 Mar 1952. (GIML 23:3)

1. Doctors. 2. Department of Internal Medicine (Director -- Head Physician -- Dr. Pal Zellner), Metropolitan Peterfy Sandor-udvari Hospital).

ZELLNER, Pal,

MATE, Maroly, dr.; ZELLNER, Pal, dr.

New facts about the Adams-Stokes syndrome. Orv. hetil. 95 no.28:
765-766 11 July 54.

1. A Fovarosi Tetenyi-uti Korhaz I. Belosztalyanak (igazgato-
belgyogyasz foorvos: Zellner Pal, dr.) kozlemenye
(HEART BLOCK)

Adams-Stokes synd. with paroxysmal tachycardia, strophanthin-
diaphyllin-procaine ther.)

(STROPHANTHIN, therapeutic use

Adams-Stokes synd. & ventricular tachycardia, with
diaphyllin & procaine)

(PROCAINE, therapeutic use

Adams-Stokes synd. & ventricular tachycardia, with
diaphyllin & strophanthin)

Cellulose Viscose 23

CA

Readily-dissolvable viscose from alkali cellulose-Zellwolle Leining A.G. (Hans Liebenstein and Wilhelm Wurm inventors). American 170,259, Feb. 11, 1922. The xanthate is obtained by treating the alkali cellulose first with CS₂ as a spray. Approx. 1/4-1/3 of the total amt. of CS₂ is added in this form, the rest in liquid form as usual. The treatment is carried out at 25-32°. P. Epstein

ZELKIN, I., red.; MATVEYEVA, A., tekhn. red.

[Key and splined joints] Soedineniya shponochnye i shlitsevye.
Izd. ofitsial'noe. Moskva, Gos. izd-vo standartov, 1961. 72 p.
(MIRA 14:9)

(Couplings—Standards)

AVDEYEV, B.A.; ZELKIN, I.I., red.; MATVEYEVA, A.Ye., tekhn.red.

[Modern machines and instruments for mechanical testing of materials] Sovremennye mashiny i pribory dlja mekhanicheskikh ispytanii materialov. Moskva, Gos.izd-vo standartov, 1960.
61 p. (Seriia obzornykh monografii po izmeritel'noi tekhnike,
no.11). (MIRA 13:12)

(Testing machines)

ZELKIN, I.I., red.; MATVEYEVA, A.Ye., tekhn.red.

[Solid fuel; methods of laboratory tests] Tverdogo toplivo;
metody laboratornykh ispytanii. Izd.ofitsial'noe. Moskva,
1960. 265 p. (MIRA 13:6)

1. Russia (1923- U.S.S.R.) Vsesoyuznyy komitet standartov.
(Fuel--Testing)

ZELKIN, I.I., red.; MATVEYEVA, A.Ye., tekhn.red.

[Glass and technical glassware] Steklo i stekliannye izdeliia,
tekhnicheskie. Izd.ofitsial'noe. Moskva, 1960. 123 p.
(MIRA 14:4)

1. Russia (1923- U.S.S.R.) Vsesoyuznyy komitet standartov.
(Glass--Standards) (Glassware--Standards)

ZEL'KOVICH, Abram Iosifovich

Reducing the cost of building petroleum refining plants, USSR,
by A. I. Zel'kovich and P. A. Khokhryakov. New York, USJPRS, 1950.
116 p. diagrs., tables (JPRS:3471)

Translated from the original Russian: Put i snizheniya stoinosti
sooruzheniya neftepererabatyvayushchikh zavodov. Moscow, 1959.

ZELKOWSKI, Jacek, mgr.inz.

The furnace pressure in pulverized fuel boilers and the output
and compression of forced and draught fans for air and furnace
gases. Energetyka Pol 16 no.7:29-32 Jl '62.

1. Dzial Kotlow i Spalania, Zaklad Badan i Pomiarow, Warszawa.

NEYELOV, O.; GENDE-ROTE, V.; ZEL'MA, G.; RUYKOVICH, V.; STANOVOV, A.;
GRANOVSKIY, N.; RED'KIN, M.; KHLEBNIKOV, A.; PORTER, L.; KOPOSOV, G.

Let's talk about your snapshots. Sov.foto 23 no.1:42-45 Ja '63.
(MIRA 16:5)

1. Chlen moskovskoy fotosektsii Soyusa zhurnalistov SSSR (for Neyelov).
2. Fotokorrespondent TASS (for Gende-Rote, Granovskiy, Red'kin, Porter).
3. Fotokorrespondent zhurnala "Sovetskaya zhenshchina" (for Zel'ma, Stanovov).
4. Fotokorrespondent zhurnala "Sovetskiy Soyuz" (for Ruykovich).
5. Predsedatel' Moskovskogo fotokluba (for Khlebnikov).
6. Fotokorrespondent zhurnala "Ogonek" (for Koposov).

(Photography)

GARANIN, A.; ZEL'MA, G.; OZERSKIY, M.; IOFIS, Ye., laureat Stalinskoy premii,
kand. tekhn. nauk, dots.; SAN'KO, Galina.

Sharing our experience with youth. Sov. foto 19 no.12:19-20 D '59.
(MIRA 13:3)

1. Fotokorrespondent zhurnala "Sovetskiy Soyuz" (for Garanin).
2. Fotokorrespondent zhurnala "Sovetskaya zhenshchina" (for Zel'ma).
3. Fotokorrespondent Sovinformbyuro (for Ozerskiy). 4. Vsesoyuznyy
gosudarstvennyy institut kinematografii (for Iofis). 5. Fotokorrespon-
dent zhurnala "Ogonek" (for San'ko).

(Photographers)

Zelman

G-2

RUMANIA/Organic Chemistry. Synthetic Organic Chemistry.

Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36203.

Author : Nenitescu, Necsoiu, Zelman.

Inst : Not given.

Title : Synthesis of Pyrrole Ring by Condensation of α -oxyketones
with β -Aminocrotonic Ester.

Orig Pub: Comun. Acad. RPR, 1957, 7, No 4, 421-426.

Abstract: A number of derivatives of pyrrole with a general formula $C(COOC_2H_5)=C(CH_3)NHC(R)-CH$ were synthesized by condensation of α -oxitones with ethyl ester of β -aminocrotonic acid (I). (In the above formula II, when R=CH₃, III R=acid (I). From acetone, C₂H₅, IV R=C₂H₅, V R=C₂H₅, VI R=K-C₂H₅O). From acetone, cyclopentamolone-2, and cyclohexanolone-2 were obtained respectively 2, 5-dimethyl-3-carbethoxypyrrol (VII), 2-methyl-3-carbethoxy-4, 5-cyclohexanepyrrol (IX). In the

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RUMANIA/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36203.

synthesis of VII the authors assume an existence of an intermediate α -oxyacetone (X), which condenses later with I. In the opinion of authors the reaction mechanism involves regrouping similar to the Amadori type. By heating a solution containing 0.05 mols X and 0.055 mols I in a mixture with 4 gr. CH_3COOH and CH_3OH followed by precipitation with water, VII is synthesized yielding 51% of 118° melting point material. In a solution containing 16cc CH_3OH +3cc CH_3COOH + 0.25cc of concentrated HCl the yield of VII was 54%. Analogically acetoин, propyoin, butyroin, benzoin, and furoin reacted with I while being heated on a steam bath for 0.3-2 hours (for the obtainment of IX -I hour at 120°C) in solutions with either CH_3COOH or with $\text{CH}_3\text{COOH} + \text{CH}_3\text{OH}$ (1/1 ration) yielding

Card : 2/3

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RUMANIA/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36203.

II - VI, VIII, IX. Given below are yields in % and melting points in °C: II 85.3, 105; III 92, 109; IV 94, 92 (from CH₃OH); V 89, 202; VI 74.5, 115 (from CH₃OH); VIII 26, 156 (from CH₃OH); IX 61, 132 (from 80% CH₃OH). An attempt to apply the same condensation method to α -oxaldehyde with I, α -glucose and α -fructose failed.

Card : 3/3

ZEL'MAN, A.S.; POLISHKIN, A.A.; SHEPEL', N.M.

For accurate fueling of diesel tractors. Mekh. sil'. hosp.
12 no.9:19 S '61. (MIRA 14:11)

1. Melitopol'skly institut mekhanizatsii sel'skogo khozyaystva.
(Diesel engines--Fuel systems)

ZELMAN, Andras

The organization and development of the sugar industry in the
Soviet Union. Cukor 16 no.4:89-91 Ap '63.

1. Cukoripari Igazgatosag.

ZEL'MAN, D.P., kand. sel'skokhoz. nauk

Advantages of planting oak in clusters. Agrobiologija no.5:
749-758 S-O '65. (MIRA 18:9)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

OL'SHANSKIY, M.A.; ZEL'MAN, D.P.

Experience of ten years in planting oak in clusters. Agrobiologiya
no.5:713-734 S-0 '60. (MIRA 13:10)

(Oak)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

ZEL'MAN, D.P., Moskva.

Effect of the structure and density of stands on the growth
and development of oak plantations. Agrobiologiya no.5:740-745
S-0 '61. (MIRA 14:10)

(Oak)

MURAVIN, Ya.G.; PARKHOMOVSKAYA, A.D.; GENEL', S.V.; ZEL'MAN,
G.S., otv. red.; BERENSHTEYN, R.Ye., otv. red.

[Epoxy resins in the food industry] Epoksidnye smoly v
pishchevoi promyshlennosti. Moskva, Tsentr. in-t na-
uchno-tekhn. informatsii pishchevoi promyshl., 1963. 22 p.
(MIRA 17:10)

SHCHERBATENKO, V.V.; GOGOBERIDZE, N.I.; ZEL'MAN, G.S., I. BROVKIN, S.I., red.

[Preservation of bread freshness] Sokhranenie svezhesti
khleba. Moskva, TSentr. in-t nauchno-tekhn. informatsii
pishchevoi promyshl., 1962. 59 p. (MIRA 17:8)

AUERMAN, L.Ya.; ADAMSON, N.F., otv. za vyp.; ZEL'MAN, G.S., otv.
za vyp.; MANVELOVA, Ye.S., tekhn. red.

[New data on the lactic acid bacteria of rye leaven] No-
vye dannye o molochnykh bakteriakh rzhanykh zakvasok.
Moskva, 1963. 21 p. (MIRA 17:4)

l. Moscow. TSentral'nyy institut nauchno-tehnicheskoy
informatsii pishchevoy promyshlennosti.

SHCHERBATEKO, V.V.; GOCOBERIDZE, N.I.; ZEL'MAN, G.S.

[Effect of baking conditions on the quality of bread]
Vliianie rezhma vypechki na kachestvo khleba. Moskva,
TSentr. in-t nauchno-tekhn. informatsii pishchevoi pro-
myshl., 1964. 34 p.
(MIRA 18:8)

MAJDECKI, Tadeusz; ZELMAN, Irmina

Atherosclerosis of the base of the brain and atherosclerotic changes
in the aorta and coronary vessels. Polski tygod. lek. 16 no.30:
1151-1155 Jl '61.

1. Z Pracowni Warszawskiej Zakladu Neuropatologii PAN; kierownik
Pracowni: doc. dr Ewa Osetowska.

{ARTERIOSCLEROSIS) (CORONARY DISEASES)
(AORTA dis) (BRAIN blood supply)

OSETOWSKA, E.; CZOCHANSKA-KRUK, J.; ZELMAN, I.

An unclassified case of atypical encephalitis or initial stage of neoplastic processes. Pediat. pol. 36 no.11:1161-1169 N '61.

1. Z Kliniki Diagnostyki Chorob Dzieci Kierownik: prof. dr med. Z. Lejmbach i z Pracowni Warszawskiej Zakladu Neuropatologii PAN Kierownik: doc. dr E. Osetowska.

(ENCEPHALITIS in inf & child) (BRAIN NEOPLASMS in inf & child)

POLAND

Halina HOFFMAN, Zofia KOWALCZYK and Irmina ZELMAN, Infants' Department (Oddzial Niemowlęcego) Head Dr H. HOFFMAN; Mother-and-Child Institute Director (dyrektor) Prof Dr F. GRGER; and Warsaw Section (Pracownia Warszawska) Institute of Neuropathology of the Polish Academy of Sciences (Zaklad Neuropatologii PAN [Polskie Akademii Nauk]) Head of Section Docent Dr E. OSETOWSKA; Head of Institute Prof Dr A. KUNICKI, Warsaw.

"Congenital Progressive Werdnig-Hoffmann Muscular Atrophy."

Warsaw, Polski Tygodnik Lekarski, Vol 17, No 45, 5 Nov 1962; pp 1761-1763.

Abstract [English summary modified]: Clinical and comprehensive histopathological data on boy who died at 14 weeks of age. Widespread neuromuscular atrophy. Two slides, 6 Western and 2 Polish references.

1/1

9

ZELMAN, Irmina

A case of tuberculous meningoencephalitis diagnosed as cerebro-meningeal hemorrhage. Gruzlica 30 no.3:269-273 '62.
(TUBERCULOSIS MENINGEAL diag) (CEREBRAL HEMORRHAGE diag)

OSETOWSKA, Ewa; ZELMAN, Irmina; MOSSAKOWSKI, Miroslaw

A transitory form of disseminated and diffuse sclerosis of the brain. Pat. polska 12 no.4:381-390 '61.

1. Z Pracowni Warszawskiej Zakladu Neuropatologii PAN Kierownik
Pracowni: doc. dr E.Osetowska.
(MULTIPLE SCLEROSIS pathol) (BRAIN pathol)

ZEIMAN, Irmina B.

Morphological and histochemical studies of basal cerebral arteries without macroscopic atherosclerotic lesions. I. Morphological analysis of blood vessels of the base of the brain without macroscopic changes. Neuropat. Pol. 3 no.3: 287-298 JI-S '65.

1. Z Zakladu Neuropatologii Polskiej Akademii Nauk w Warszawie (Kierownik: prof. dr. med. E. Osatowska).

ZEIMAN, J.; MISIK, M.

Appurtenance of the algae and coral reefs in the Myjava Highland (Brezovske pohorie) to the paleocene. p. 301

KRASY SLOVENSKA (Poverenictvo dopravy. Riaditelstvo pre cestovny ruch)
Bratislava Czechoslovakia

Vol. 10, no. 2, 1959

Monthly list of East European Accessions (EEAI) LC. VOL. 9, no. 1 January 1960

Uncl.

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

ZEL'MAN, B., inzh.; KNYSH, P., inzh.

Complete automation of the electric welding of large conical elements. Energomashinostroenie 4 no.3:41 Mr '58. (MIRA 11:5)
(Electric welding)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

AUTHORS:

Zel'man, B.M., and Knysh, P.V., Engineers

135-58-1-16/23

TITLE:

Automatic Electric Welding of Large Diameter Cones (Avto-maticheskaya elekrosvarka konusov bol'shogo diametra)

PERIODICAL:

Svarochnoye Proizvodstvo, 1958, Nr 1, p 38 (USSR)

ABSTRACT:

Cones of large diameters, made of sheet steel, are basic structural parts of separators and cyclones. The Chernovtsy Machine Building Plant's technology for cone construction is fully described and illustrated. The process has the following advantages: 1) panel assembly is mechanized without tack welding on a magnetic stand; 2) labour consumption is reduced by 50%; 3) The utilization of uniform sheet sizes reduces the amount of weld metal by 50 - 60%; 4) A proper and precise cone shape is obtained. The plant designed an electro-magnetic stand for the assembly and a bracket-revolving device for the automatic welding of the parts. There are 4 figures and 1 photo.

ASSOCIATION: Chernovitskiy mashinostroitel'nyy zavod (The Chernovtsy Machine Building Plant)

Card 1/1 1. Conc-Construction 2. Welding-Applications

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

ZEL'MAN, B.M., inzh.; KNYSH, P.V., inzh.

Automatic welding of large cross section cones. Svar. proizv.
no.1:38 Ja '58.
(MIRA 11:1)

1.Chernovitskiy mashinostroitel'nyy zavod.
(Electric welding)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

D. ZEIMAN

"Planting oaks in hills for the protection of field crops," Tr. from the Russian.
p. 7. (ANALELE ROMANO-SOVIETICE. SERIA SILVICULTURA-INDUSTRIALA LEMNULUI SI A MARTEL,
Vol. 7, seria a II-a, no. 13, May/June 1952, Bucuresti, Romania.)

SO: Monthly List of East European Accessions L. C., Vol. 2, No. 7, July 1953, Unclassified.

OL'SHANSKIY, M.A., akademik; ZEL'MAN, D.P., kandidat sel'skokhozyaystvennykh nauk; ZHELEZNOV, G.F., kandidat sel'skokhozyaystvennykh nauk.

Theoretical and practical achievements in shelterbelt forestry; results of eight years' work in spotseeding oak at experiment institutions. Agrobiologiya no.4:79-108 J1-Ag '57. (MLRA 10:9) (Oak). (Windbreaks, shelterbelts, etc.)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

ZEL'MAN, D.P.

Oak

Group planting of oaks under the shelter of agricultural crops. Agrobiologija No. 6, 1951

Monthly List of Russian Accessions, Library of Congress, May 1952. Unclassified.

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

KAWIAK, Wieslaw; ZELMAN, Irmina

Van Bogaert's subacute encephalitis with nodular microglial infiltrations. Neurol. neurochir. Psychiat. pol. 12 no.5: 651-659 '62.

1. Z Kliniki Chorob Nerwowych AM w Lublinie Kierownik: prof. dr W. Stein Z Pracowni Warszawskiej Zakladu Neuropatologii PAN Kierownik Pracowni: doc. dr E. Osetowska.

(CEREBRAL SCLEROSIS DIFFUSE)

PLEVAKO, Ye.A., doktor biol. nauk, red.; SIVOLAPA, I.K., kand. ekon. nauk, red.; ZEL'MAN, G.S., d'tv. za vypusk; MANVELOVA, Ye.S., tekhn. red.

[Yeast industry of the U.S.S.R.] Drozhzhevaia promyshlennost' SSSR. Moskva, 1962. 89 p. (MIRA 16:4)

l. Moscow. TSentral'nyy institut nauchno-tehnicheskoy informatsii pishchevoy promyshlennosti.
(Yeast)

ADAMSON, N.F., otv. za vyp.; ZEL'MAN, G.S., otv. za vyp.;
MANVELOVA, Ye.S., tekhn. red.

[Use of dry skim milk and oil-and-water emulsions in
bread making] Ispol'zovanie obezhirennogo sukhogo moloka
i zhiro-vodnykh emulsii v khlebopechenii. Moskva, 1963.
23 p. (MIRA 16:9)

1. TSentral'nyy institut nauchno-tehnicheskoy informatsii
pishchevoy promyshlennosti.
(Bread)

KAWIAK, Wieslaw; ZELMAN, Irmina

Van Bogaert's subacute encephalitis with nodular microglial infiltration. Neurol neurochir psych 12 no.5:651-659 S-0 '62.

1. Klinika Chorob Nerwowych, Akademia Medyczna, Lublin. Kierownik: prof. dr W. Stein, i Pracownia Warszawska Zakladu Neuropatologii Polskiej Akademii Nauk, Warszawa. Kierownik Pracowni: doc. dr E. Osztowska.

HOFMAN, Halina; KOWALCZYK, Zofia; ZELMAN, Irmina

A congenital form of progressive spinal muscular atrophy of the Werdnig-Hoffman type. Pol. tyg. lek. 17 no.45:1781-1763 5 N '62.

1. z Oddzialu Niemowleczego; p.o. kierownika: dr med. H. Hofman, Instytutu Matki i Dziecka w Warszawie; dyrektor: dr F. Groer i z Pracowni Warszawskiej kierownik: doc. dr E. Osetowska, Zakladu Neuropatologii P.A.N.; kierownik: prof. dr A. Kunicki.

(MUSCULAR ATROPHY) (PARALYSIS)

ZEL'MAN, M.Ya.

Meeting of the shock workers of communist labor. Vest. sviazi
25 no.7:24 Jl '65. (MIRA 18:8)

1. Zamestitel' nachal'nika Moskovskoy gorodskoy radiotranslyatsionnoy
seti.

ZELIKAN R.D.

ACHERKAN, N.S., doktor tekhnicheskikh nauk; professor, redaktor; BEY...
ZELIKAN, R.D., redaktor literatury po metalloobrabotke i stankostroyeniyu; POPOVA, S.M., tekhnicheskiy redaktor.

[Study of machine tools; on the 75th anniversary of Academician A.V.Gadolin's lecture: "On rotational speed shifting of lathe and drill spindles."] Issledovaniia v oblasti metalloreshushchikh stankov; k 75-letiiu doklada akad. A.V.Gadolina "O peremenakh skorostei vrashcheniya shpindelei v tokarnykh i sverlil'nykh stankakh." Pod red. N.S.Acherkana. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1952. 158 p. [Microfilm] (MIRA 7:10)

(Machine tools)

ZEL'MAN, S.P.; ROMANOVA, N.V., redaktor; POLOSINA, A.S., tekhnicheskiy redaktor.

[Centralized supply of petroleum products to machine-tractor stations, state farms, and tractor crews; experience of workers at the Kolomna Petroleum Base] Tsentralizovannoe snabzhenie nefteproduktami KTS, sovkhozov i traktornykh brigad; opyt kollektiva Kolomenskoi neftebazy. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1954. 36 p.

(MLRA 8:1)

(Petroleum industry)

ZEL'MAN, S.P.

[Centralized supply of petroleum products to machine-tractor stations, state farms and tractor crews; experience of workers at the Kolomna Petroleum Base] [Sentralizovannye snabzhenie nefteproduktami MTS, sovkhozov i traktornykh brigad. (Opyt kollektiva Kolomenskoi neftebazy) Moskva, Gostoptekhizdat, 1954. 36 p.] (MIRA 7:11D)

ZEL'MAN, S. P.

"Centralized Supply of Petroleum Products for Machine-Tractor Stations, Sovkhozes, and Tractor Brigades," State Scientific and Technical Publishing House for Literature on Petroleum and Mined Fuel, Moscow, 1954

Partial translation D 180617, 11 Feb 55

ZEL'MAN, S. P.

AID P - 290

Subject : USSR/Engineering
Card : 1/1
Author : Zel'man, S. P.
Title : Centralized supply of petroleum products to Machine Tractor Station (MTC) and to state farms
Periodical : Neft. Khoz., v. 32, #4, 78-80, Ap 1954
Abstract : The author describes the operation of a newly organized central supply brigade for delivery of fuel and lubricants to the state farms and Machine Tractor Station. Analysis of the brigade operation indicates an appreciable economy in cost and working time.
Institution : None
Submitted : No date

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

ZELMANOFF, I.L.

W. P. BERDENNIKOFF, Phys. Zeits. d. Sowjetunion 4, No 5/6, 1933,
873-884

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

ZELMANOFF, I. L.

S. E. BRESLER, Phys. Zeits. d. Sowjetunion 4, 5-6, pp. 885-888, 1933

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"

FRANK-KAMENETSKIY, D.A., prof., ovt.red.; VORONTSOV-VEL'YAMINOV, B.A.,
red.; SMORODINSKIY, Ya.A., prof., red.; ZEL'MANOV, A.L.,
starshiy nauchnyy sotrudnik, red.; SAGDEYEV, R.Z., mladshiy
nauchnyy sotrudnik, red.; SAMSONENKO, L.V., red.izd-va;
SHEVCHENKO, G.N., tekhn.red.

[Transactions of the sixth conference on cosmogony; extra-galactic
astronomy and cosmology] Trudy shestogo soveshchaniia po vopro-
sam kosmogenii, 5-7 iunia 1957 g.; vnegalakticheskaiia astronomiia
i kosmologiiia. Moskva, Izd-vo Akad.nauk SSSR, 1959. 273 p.
(MIRA 12:12)

1. Soveshchaniye po voprosam kosmogenii, 6yh, 1957. 2. Chlen-
korrespondent Akademii pedagogicheskikh nauk SSSR (for Vorontsov-
Vel'yaminov).

(Cosmology--Congresses)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5

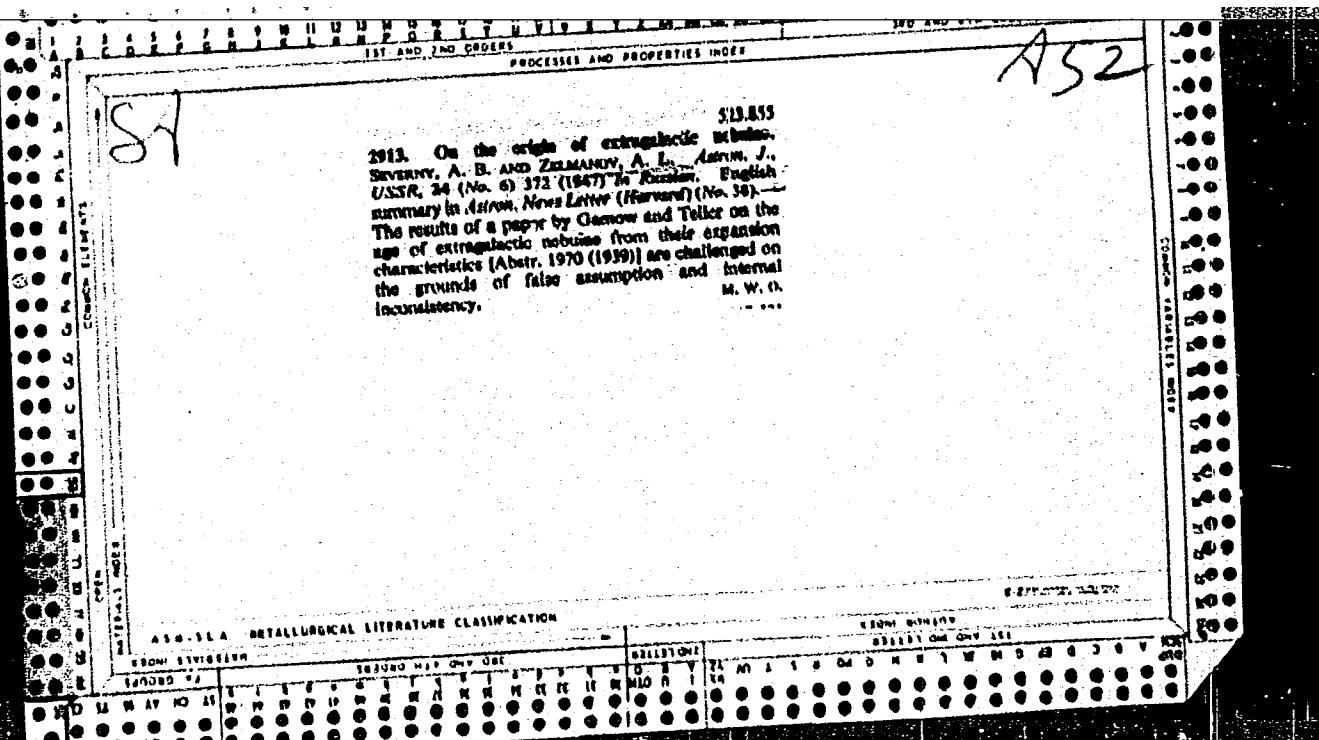
ZEL'MANOV, A. L.

"Problem of determining the orbit of visual binaries," Astron. Zhur., 16, No. 4, 1939.

Report U-1518, 23 Oct 1951.

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001964410010-5"



ZEL'MANOV, AI. L.

Zel'manov, A. L. "Cosmology," in symposium: Astronomiya v SSSR za tridtsat' let, Moscow-Leningrad, 1948, p. 192-202

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

ZEL'MANOV, A. L.

USSR/Mathematics - Mechanics
Mathematics - Coordinates

Aug 48

"The Use of Associated Coordinates in Nonrelativistic Mechanics," A. L. Zel'manov, State Astr Inst imeni P. K. Shternberg, 4 pp

"Dok Ak Nauk SSSR" Vol LXI, No 6

Discusses "unitary" treatment of the movement of a solid medium, consisting of the application of a moving coordinate system associated with the medium. Submitted by Acad V. A. Fok, 17 Jun 48.

35/49T50

USSR/Theoretical Physics - Relativity. Unified Field Theory.

B-2

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 8383

Author : Zel'manov, A.I.

Inst : Astronomical Institute imeni Shternberg

Title : Chronometric Invariance and Frames of Reference in the
General Theory of Relativity.

Orig Pub : Dokl. AN SSSR, 1956, 107, No 6, 815-818.

Abstract : The author introduces quantities that retain their values in all coordinate systems at rest relative to each other and in the same frame of reference. Such quantities are called chronometric invariant. They represent tensors in three dimensional space, everywhere orthogonal to the time lines. The Einstein gravitational field equations are written in terms of chronometric invariant quantities and chronometric invariant operators of differentiation (the latter are indicated by an asterisk). For the quantity R, proportional to the cubic root of the volume of

Card 1/2

State Astronomical Inst. im S. K. Shternberg

24(5)

AUTHOR:

Zel'manov, A.L.

SOV/155-58-2-28/47

TITLE:

Non-Relativistic Gravitation Paradox and General Theory of
Relativity (Nerelativistskiy gravitatsionnyy paradox i
obshchaya teoriya otnositel'nosti)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki,
1958, Nr 2, pp 124-127 (USSR)

ABSTRACT:

The present paper completes the author's earlier publications
[Ref 1,2] on similar questions. Newton's gravitation theory is
understood as an approximation to that one of Einstein, where
Newton's law of gravity is formulated in three variants. The
author investigates the difficulties of Newton's theory
(gravitation paradox) resulting from mass distributions and
being not peculiar to the theory of Einstein.
There are 2 Soviet references.

ASSOCIATION: Gosudarstvennyy astronomicheskiy institut imeni P.K.Shternberga
(State Astronomical Institute imeni P.K.Shternberg)

SUBMITTED: January 11, 1958

Card 1/1

24(5)

AUTHOR:

Zel'manov, A. L.

SOV/20-124-5-19/62

TITLE:

On the Posing of a Problem of the Infinity
of Space in the Theory of General Relativity
(O postanovke voprosa o beskonechnosti prostranstva
v obshchey teorii otnositel'nosti)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 5,
pp 1030-1033 (USSR)

ABSTRACT:

In general relativity transition of homogeneous isotropic cosmological models to an anisotropic inhomogeneous universe requires precise formulation of the problem as to whether space is finite or infinite. This problem is here described as the problem of expansion. It is possible to raise this problem also in some other cases uniquely, but not in an anisotropic inhomogeneous universe. First, the system of denotation is defined. A system of reference is assumed, i. e. a congruence of space-time lines as lines of time. ($x^i = \text{const}$) At every world point a three-dimensional local space is then determined, which at that point of time is orthogonal to the world line. Also the spatial sections

Card 1/3

On the Posing of a Problem of the Infinity
of Space in the Theory of General Relativity

SOV/20-124-5-19/62

are assumed to be given. Expressions are then written down for the elementary length dn in the space of a given system of reference and for the elementary length dn in the spatial section $x^0 = \text{const}$. The properties of this metric are mentioned. The following problem arises: Is the spatial volume of the (space-time) ranges, or even of the entire world of the system of coordinates, if referred to other systems, finite or infinite according to the selected spatial cross sections and time vectors? When investigating the problem under discussion it is advisable to consider a system of reference accompanying the mass everywhere as physically distinguished. Such a system satisfies the condition $T_{\mu}^{\mu} = 0$ at $T_{\nu}^{\nu} \neq 0$ if T_{ν}^{ν} denotes the four-dimensional energy-momentum-tensor. However, also every other physically distinguished system is usable. Two cases are possible: 1. There exists a uniquely determined physically distinguished system, the space of which is, however, holonomic. In this case the

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On the Posing of a Problem of the Infinity
of Space in the Theory of General Relativity

SOV/20-124-5-19/62

problem of the expansion of space may be posed uniquely as a problem of the expansion of a holonomic space of a physically distinguished problem. 2. Either the space of the physically excellent system is not holonomic, or there is no such uniquely determined system. In this case the above problem concerning the expansion of space cannot be raised. Next, examples are given which belong to case 2. Every treatment of the problem of infinity is connected with the investigation of infinite regions of the universe. A discussion of this problem within the framework of a theory applying to finite ranges inevitably must require extrapolation. There are 5 references, 3 of which are Soviet.

ASSOCIATION: Gosudarstvennyy astronomicheskiy institut im. P. K. Shternberga (State Astronomic Institute imeni P. K. Shternberg)

PRESENTED: November 6, 1958, by V. A. Fok, Academician

SUBMITTED: November 3, 1958
Card 3/3

ZELMANOV, A.L. [Zel'manov, J.L.] (Moskva)

Metagalactic celestial structures and the universe. Pt.2.
A.L. Zelmanov. Fiz szemle 1: no.8:245-251 Ag'64

87399

3.1400

S/020/60/135/006/014/037
B019/B056AUTHOR: Zel'manov, A. L.TITLE: The Problem of the Deformation of the Comoving Space in
Einstein's Theory of GravitationPERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 6,
pp. 1367 - 1370

TEXT: The equations for energy and momentum are given:

$$G_0 - \frac{1}{2} g_{0\mu} G + \lambda g_{0\mu} = -\kappa T_0 \quad (1\alpha),$$

$$G_{ik} - \frac{1}{2} g_{ik} G + \lambda g_{ik} = -\kappa T_{ik} \quad (1\beta),$$

$$(T_0^\nu)_\nu = 0, \quad (T_i^\nu)_\nu = 0, \quad (2).$$

Here, $T_{\mu\nu}$ denotes the energy-momentum tensor; $G_{\mu\nu}$ is the world-curvature tensor; $G = G^\nu_\nu$, $g_{\mu\nu}$ is the metric world tensor; and κ is

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The Problem of the Deformation of the
Comoving Space in Einstein's Theory of
Gravitation

S/020/60/135/006/014/037
B019/B056

Einstein's gravitational constant. It holds that

$$\begin{aligned} (\omega_0)^2 &= g_{c0}, (\omega_0 \omega_1)^2 = -g_{00}g_{11} + (g_{c1})^2, \\ (\omega_0 \omega_1 \omega_2)^2 &= gg^{33}, (\omega_0 \omega_1 \omega_2 \omega_3)^2 = -g, y_{ik} = -g_{ik} \end{aligned} \quad (3)$$

$$\text{and } \sqrt{g_{00}} = \omega_0, g_{01}/\sqrt{g_{00}} = \Omega_1, g_{c2}/\sqrt{g_{00}} = y_{12}\Omega_1/y_{11} - \omega_1\Omega_2/y_{11},$$

$$g_{03}/\sqrt{g_{00}} = y_{13}\Omega_1/y_{11} + z^{23}\omega_1\Omega_2/y_{11}z^{33} - \omega_1\omega_2\Omega_3/y_{z^{33}}, g_{ik} = -y_{ik}, \quad (5)$$

$$\text{where } \Omega_1 = k\sqrt{(\omega_1)^2 - y_{11}}, \Omega_2 = l\sqrt{(\omega_2)^2 y_{11} - y_{z^{33}}},$$

$$\Omega_3 = m\sqrt{y\{(\omega_3)^2 z^{33} - 1\}}, k^2 = l^2 = m^2 = 1 \quad (6)$$

It is assumed that in matter no other than gravitational- and mass-inertial forces are active, and the holomorphic functions K_1, K_2 ,

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The Problem of the Deformation of the
Comoving Space in Einstein's Theory
of Gravitation

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and K_3 are given:

$$J^i = 0; \rho = K_1(p); D_{jl} \varepsilon^{jl} = \rho K_2(h_{ik}, D_{ik}) \geq 0 \quad (7),$$

$$K_3(\rho, \varepsilon_{ik}, h_{ik}, D_{ik}) = 0 \quad (8).$$

The density vector of the mass current J^i , the mass density ρ , the pressure p , and the stress tensor ε^{ik} are determined from the equations $T_{oo} = \rho g_{oo}$; $cT_o^i = J^i/\sqrt{g_{oo}}$; $c^2 T^{ik} = ph^{ik} - \varepsilon^{ik}$, $\varepsilon_i^i = 0$. Using the sets of equations (5) - (6) and (7) - (8), the 20 functions of $g_{\mu\nu}$ and $T_{\mu\nu}$ are expressed by 14 functions of ω_ν , y_{ik} , q_{ik} , and p ; thus, functions (1) and (2) are transformed. If the function ω_ν is given in a world range Q_ω , then (2) and (18) will form a set of $4 + 6$ equations denoted by Σ . Under these prerequisites it is then shown that in any world range that contains a point from Q_ω , a system of holomorphic functions

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Comoving Space in Einstein's Theory
of Gravitation

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p , d_{ik} , and y_{ik} exists, which satisfies Σ and the initial conditions.
Further, these functions also satisfy (1a). Thus, the functions $g_{\mu\nu}$ and
 $T_{\mu\nu}$ are found, which satisfy (1) with all demands made. There are
7 references: 6 Soviet and 1 Belgian.

ASSOCIATION: Gosudarstvennyy astronomicheskiy institut im.
P. K. Shternberga (State Astronomical Institute imeni
P. K. Shternberga)

PRESENTED: August 1, 1960, by V. A. Fok, Academician

SUBMITTED: June 16, 1960

Card 4/4

Sovremennye po voprosam kosmogonii. 6th, 1957.
 Trudy Sovetskikh i stranicheskikh astronomicheskikh konferentsii i simpoziumov
 (Transactions of the 6th Conference on Problems of Cosmogony,
 Extraterrestrial Astronomy and Cosmology) Moscow, Izd-vo Akad. Nauk SSSR, 1959.
 273 p. Errata slip inserted. 1,000 copies printed.

Spansoring Agency: Akademiya nauk SSSR. Astronomicheskiy Sovet.

Editorial Board: D.A. Frank-Kamenetskiy, Professor (Resp. Ed.);
 S.I. Vavilov (General Chairman), Corresponding Member, Academy of Pedagogical Sciences USSR; Ya. A. Sazanovskiy, Professor; A.L. Zel'manov, Senior Scientific Contributor; Prof. N.Z. Sazanovskiy;
 (Scientific Secretary) Junior Scientific Contributors Ed. of Publishing House: L.V. Sazonchenko; Tech. Ed.: O.M. Shurenko.

PURPOSE: The publication is intended for astronomers, cosmoprophysicists and theoretical physicists interested in general problems of cosmology.

CONTENTS: This is a collection of reports given at the 6th Conference on the Problems of Cosmogony, June 5-7, 1957. In the publication observational data in the field of extraterrestrial astronomy are summarized. The data are analyzed from a theoretical point of view and the accuracy and reliability of the observations are evaluated. The principal cosmological theories are discussed in detail, for one direction in Soviet literature and correlated with observational data, primarily with the results of measurements. The systematicity of cosmology to the theory of the formation of celestial elements and general cosmodynamics and paleontological problems of cosmolology are also investigated. No personalities are mentioned. References accompany some of the articles.

MEETING SESSION OF JUNE 6.

COSMOLOGICAL THEORIES BASED ON THE GRAVITATION THEORY

Generalized Arie: Isotropic Models of the Universe 151
 Discussion by E. Schmutz (West Germany) 152

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